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COMPLETE SPECIFICATION.

“Improvements in and relating to Exercising Machines.”

I, JOHN FREDRICK VANDERBOSS, of 7222 Peoria Street, Chicago, County of Cook, State of Illinois, United States of America, Gentleman, do hereby declare the nature of this invention and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement:

5 This invention relates to improvements in exercising machines of that type comprising a movable muscle exercising element, and a motor for imparting motion to said element.

One object of the present invention is the provision of an exercising machine which comprises a motor, a rotary crank shaft driven by said motor, and 10 movable handles connected to the crank shaft.

15 A further object of the present invention is the provision of an exercising machine wherein a tread mill is driven from the crank shaft, and wherein a horizontal bar is disposed above the tread mill.

In the accompanying drawing,

15 Figure 1 is a perspective view of the complete exercising machine.

Figure 2 is an enlarged detail vertical longitudinal section through one end of the tread mill.

20 Figure 3 is a detail perspective view illustrating the engagement between the bars of the tread mill and the guides therefor.

25 The machine contemplated in this invention comprises a pair of standards 1 set at a suitable distance apart and having enlarged base portions 2 adapting said standards to be securely fastened to the floor as shown in Figure 1. The standards are provided at their upper ends with bearings 3 for the reception of a horizontally disposed crank shaft 4, 5 designating oil cups by means of which the shaft 4 is lubricated.

30 The shaft 4 is provided with oppositely set cranks 6 to which are connected rods 7 provided at their forward ends with handles 8 adapted to be grasped by the operator. The rods 7 pass through bearing sleeves 9 which are supported by forwardly extending bracket arms 10, the bearing sleeves 9 having a pivotal engagement with the bracket arms 10, as shown at 11, thus providing for the oscillatory movements of said rods under the influence of the crank shaft 4 by which said rods are driven.

35 Motion is imparted to the crank shaft 4 by means of a motor 12 such as an electric motor which may be secured to the floor as shown in Figure 1 and from which a drive chain 13 extends upward over a sprocket wheel 14 fast on one end of the crank shaft 4.

40 To the opposite end of the crank shaft 4 is secured another sprocket wheel 15 from which a drive chain 16 extends downward around another sprocket wheel 17 on a shaft 18 at one end of a tread mill, said mill comprising another shaft 19 at the opposite end thereof. The shaft 18 is provided with a pair of sprocket wheels (not shown) around which passes an endless tread mill element consisting of an endless series of parallel slats or bars 20 suitably connected together by endless chains 21 at the opposite ends of said bars. The shaft 19 is likewise provided with similar sprocket wheels, one of which is shown at 22 45 in Figure 2, the teeth of said sprocket wheels being located a suitable distance apart to engage between the parallel tread mill bars 20 so as to drive said tread mill.

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Each of the bars 20 is provided at its opposite ends with antifriction rollers 23 journaled on projecting end pintles 24 of said bars and these rollers move within oppositely arranged guides 25 each of which is of oblong construction as shown in Figure 1, providing endless raceways in which the rollers 23 move. At opposite ends of the tread mill there are arranged raised platforms 26, the upper 5 surfaces of which are approximately in line with the upper surface of the tread mill element 20 to prevent injury to the feet of the operator in stepping upon and off the machine.

Above the tread mill is arranged a horizontal bar 27 supported by oppositely arranged uprights 28 extending down to the floor and being secured thereto at 10 opposite sides of the tread mill. The horizontal bar is braced by means of oppositely inclined stays 29 which extend from the upper ends of the uprights 28 downward to the floor to which they are secured in any convenient manner.

From the foregoing description it will be understood that the crank shaft 4 and the tread mill are motor-actuated and therefore when the athlete grasps 15 the handles 8, compulsory exercise is enforced. When the athlete occupies the tread mill he is forced to keep in motion commensurate with the speed at which the mill is driven in order to maintain his position on the tread mill. When fatigued, he may grasp the horizontal bar 27 and thereby remove any desired portion of his weight from his feet, thus varying the degree of exercise. 20

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

1. In an exercising machine, the combination with a motor, of a rotary crank shaft driven by said motor, and movable handles connected to the crank shaft. 25
2. In an exercising machine such as claimed in Claim 1, bracket arms, and bearing sleeves pivotally mounted upon the bracket arms, and handles passing through the sleeves.
3. In an exercising machine, the combination with a motor, of a rotary crank shaft driven by said motor, movable handles connected to the crank shaft, a 30 tread mill operated from the crank shaft, and a horizontal bar disposed above the tread mill.

Dated this 9th day of June 1908.

J. S. WITHERS,  
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London.

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[This Drawing is a reproduction of the Original on a reduced scale.]

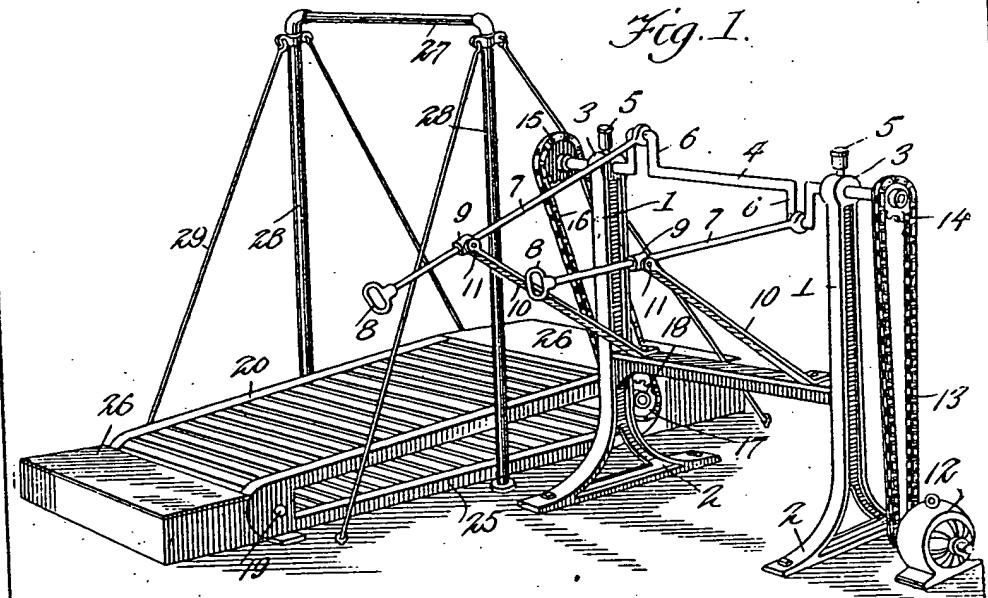


Fig. 1.

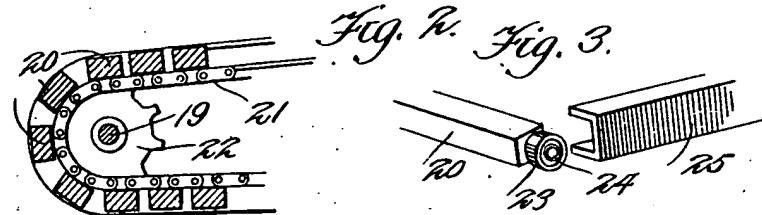
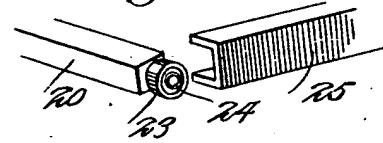


Fig. 2. Fig. 3.



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